Toward Better Understanding and More Realistic Simulation of Warm Season Precipitation

Proposal Number GC 04-293

Progress Report Figures

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A Proposal to Climate Prediction Program for the Americas
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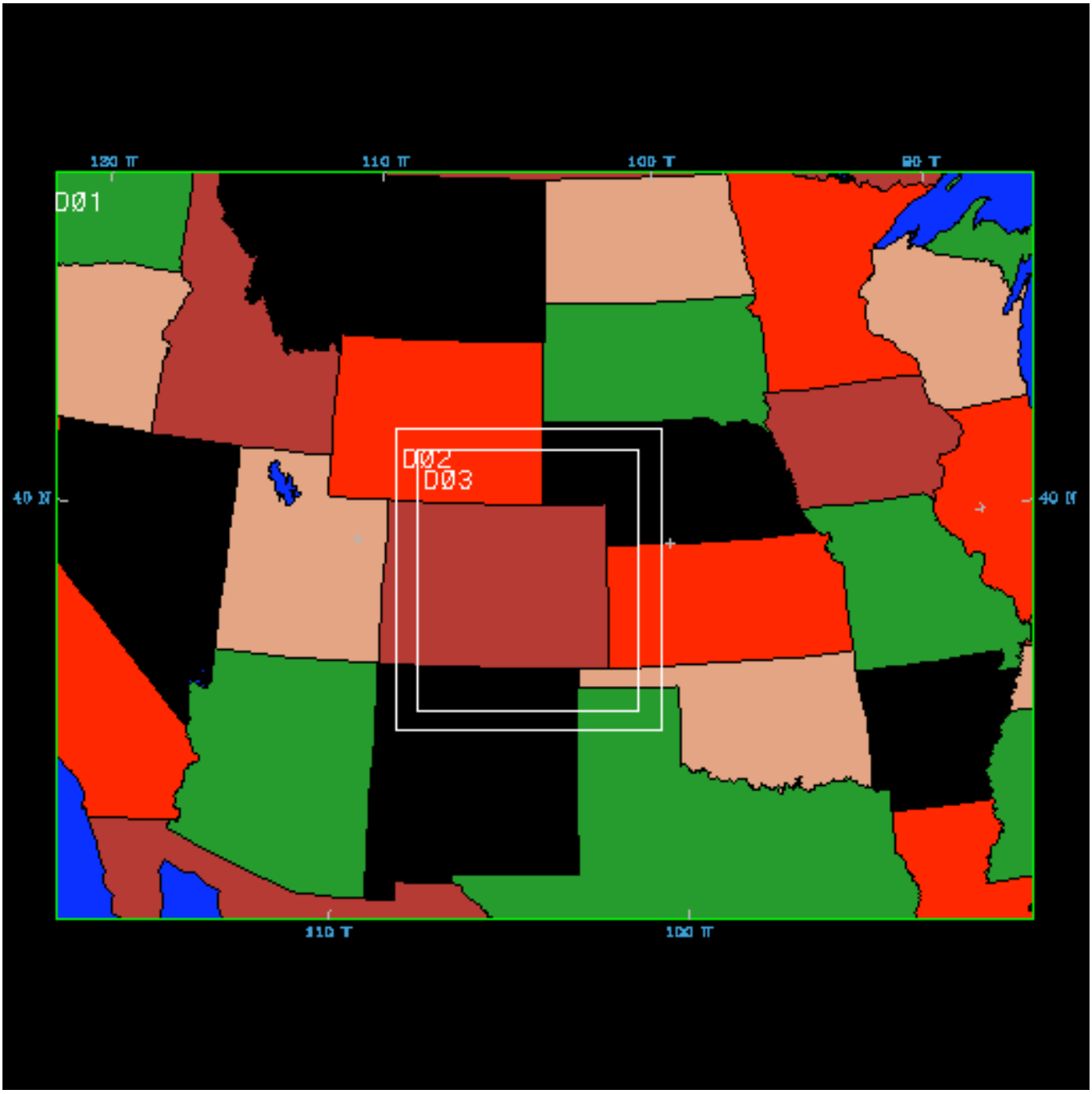


Figure 1. Simulation domains.

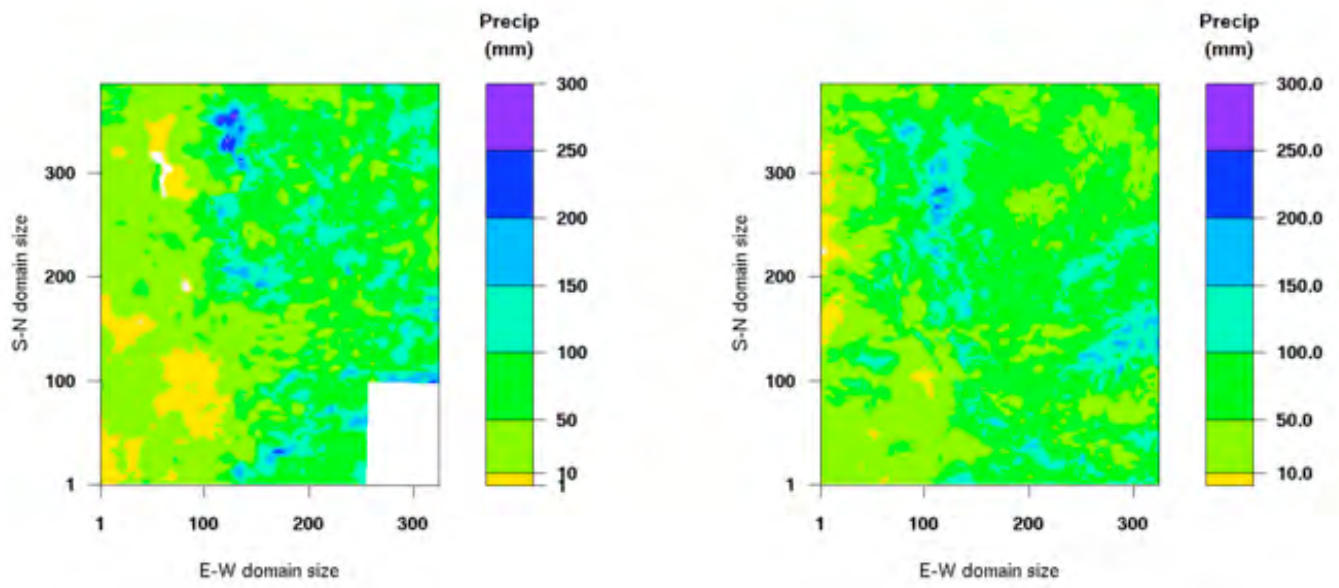


Figure 2. Accumulated precipitation in June 2004 for Stage4 data (left) and in the high resolution domain (right). White area in the Stage4 plot represents incomplete data.

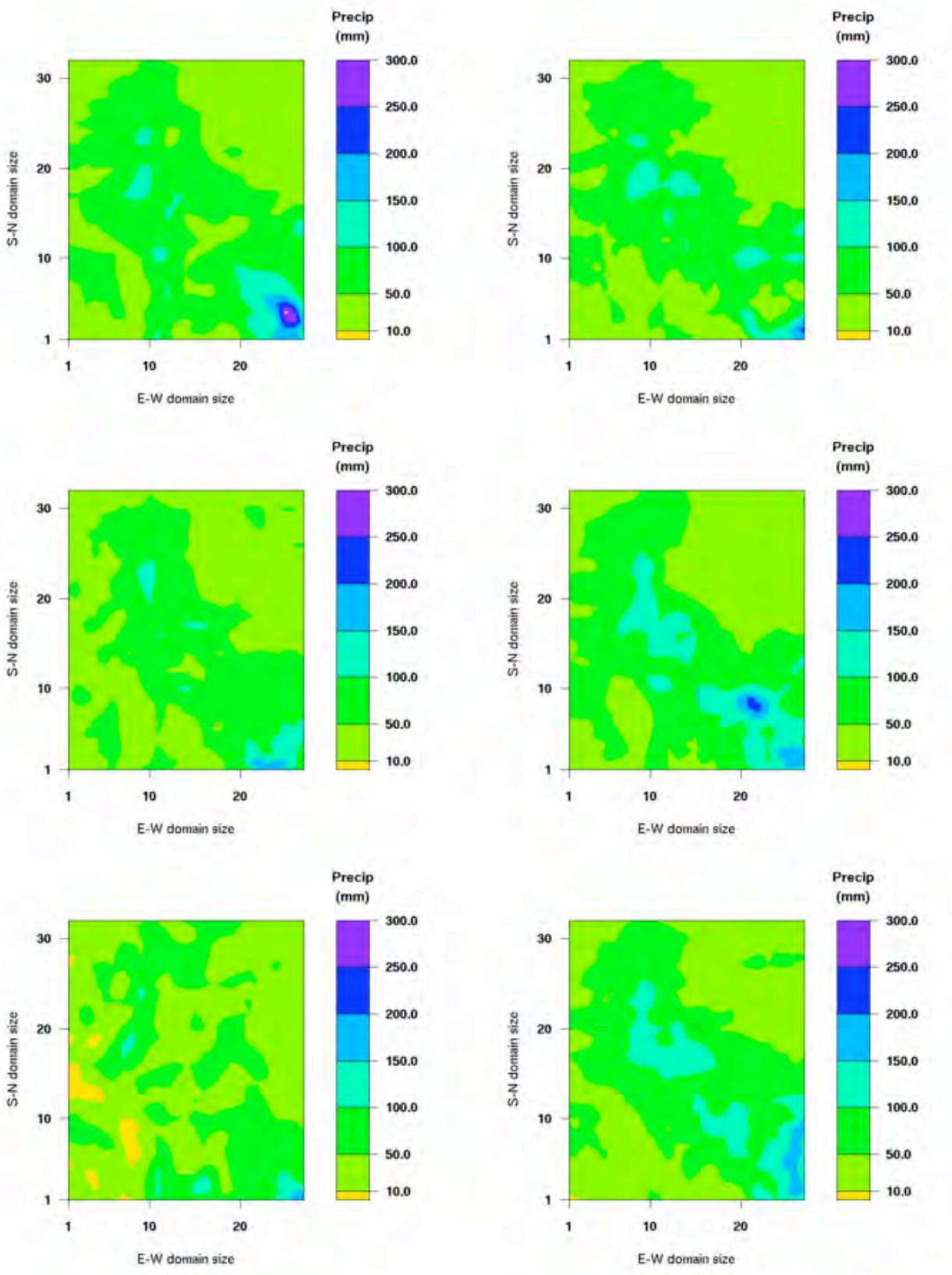


Figure 3. Accumulated precipitation as simulated for June 2004 using various different closures. From top to right and down: Grell-Devenyi ensemble parameterization, GR, BFC, KR, KF, and AS.

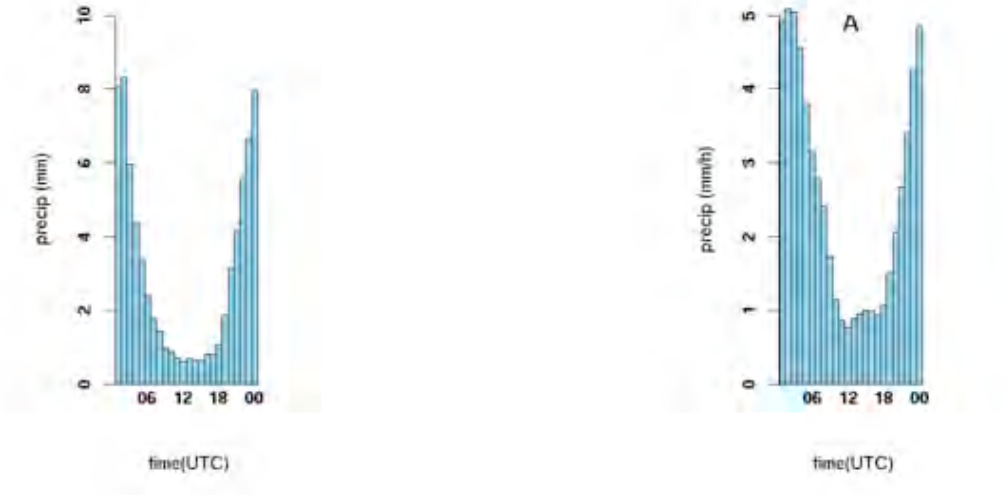


Figure 4. Monthly average diurnal cycle of grid-averaged precipitation: Stage4 data (left), high resolution domain (right).

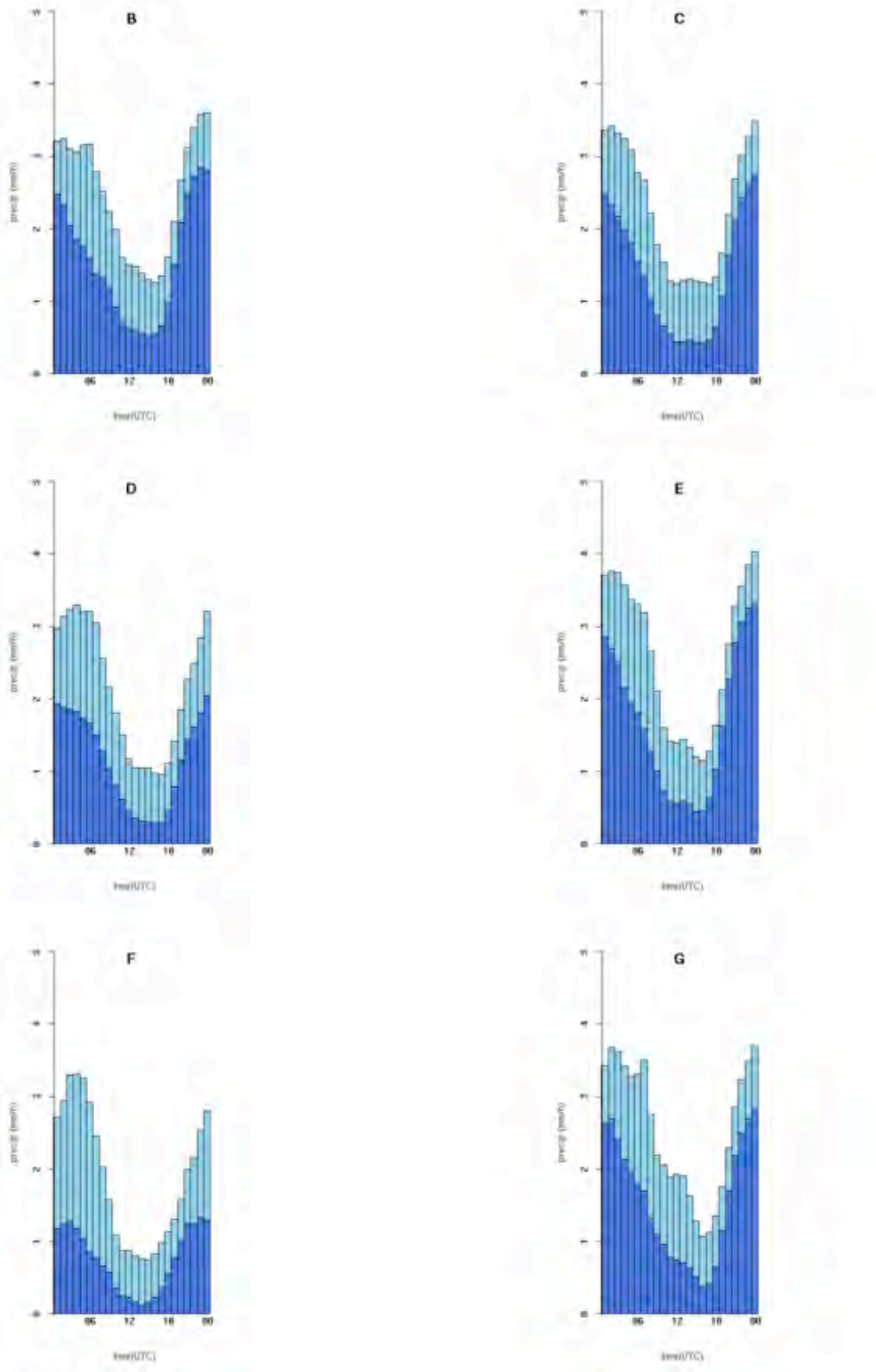


Figure 5. Monthly averaged diurnal cycle of grid-averaged precipitation: As Figure 1b: from top to right and down: Grell-Devenyi ensemble parameterization (B), GR (C), BFC(D), KR (E), KF (F), and AS (G). Light blue – resolved precipitation, dark blue – unresolved precipitation.

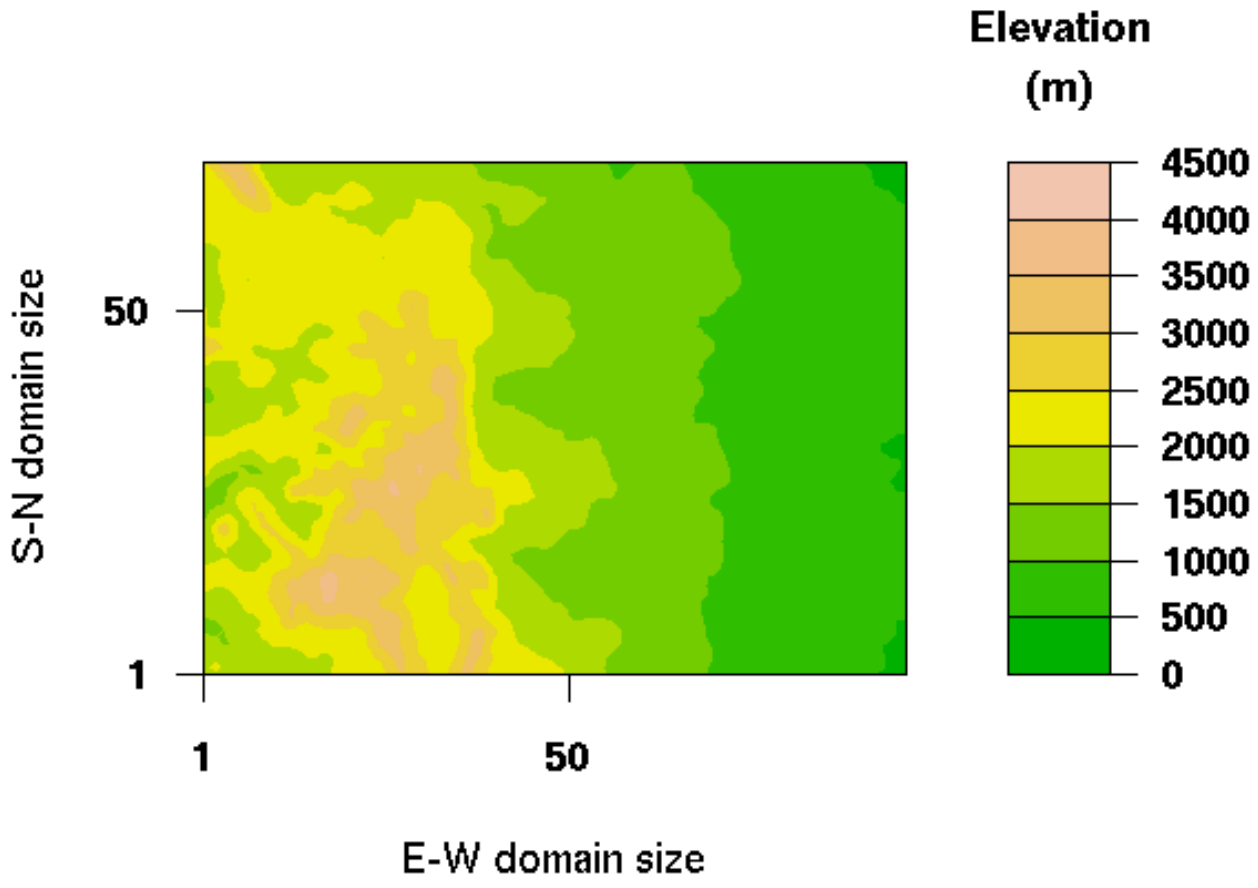
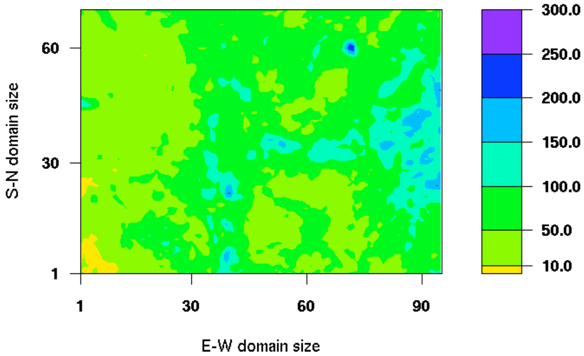


Figure 6. Simulation domain.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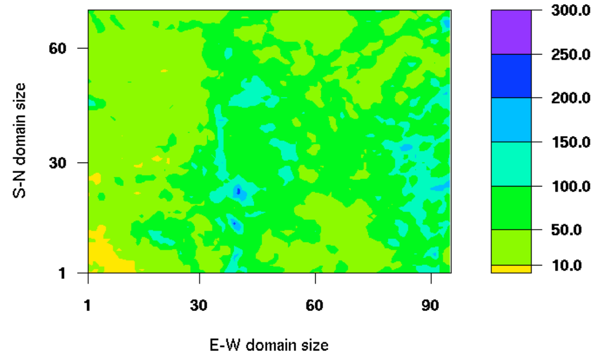
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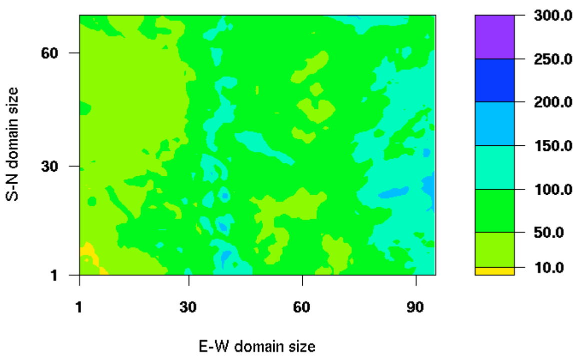
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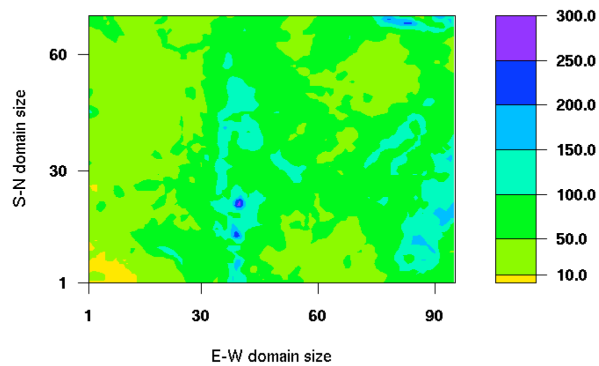
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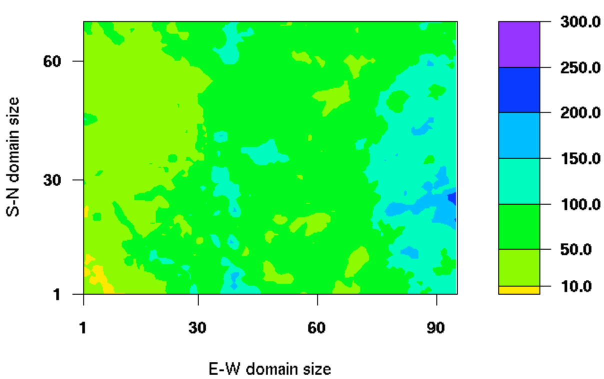
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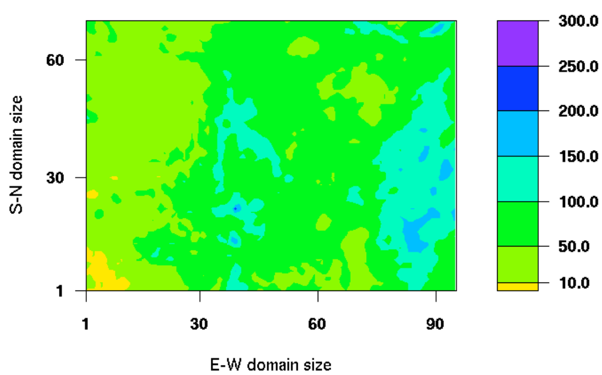
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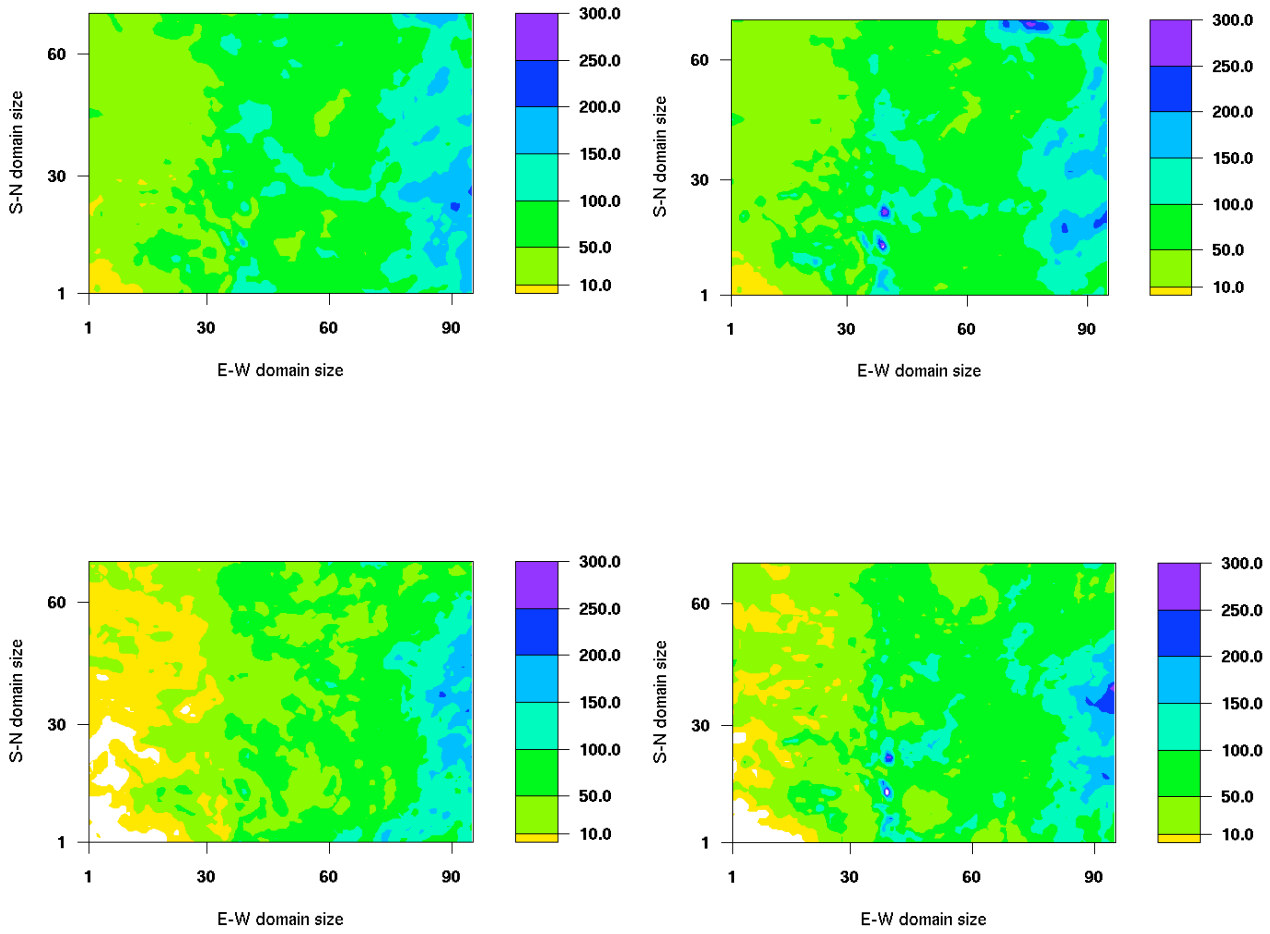

Figure 7. Accumulated precipitation as simulated for July 2005 using various different closures for minimum (left) and maximum(right) initial soil moisture. From the top: GR, BFC, KR, KF, and AS

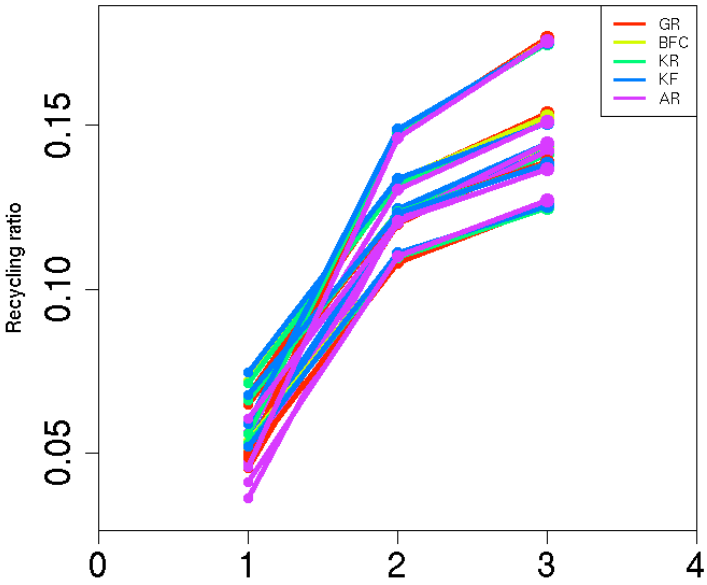

Figure 8. Recycling rate for different convective closures during summers 2004,2005, and 2006.

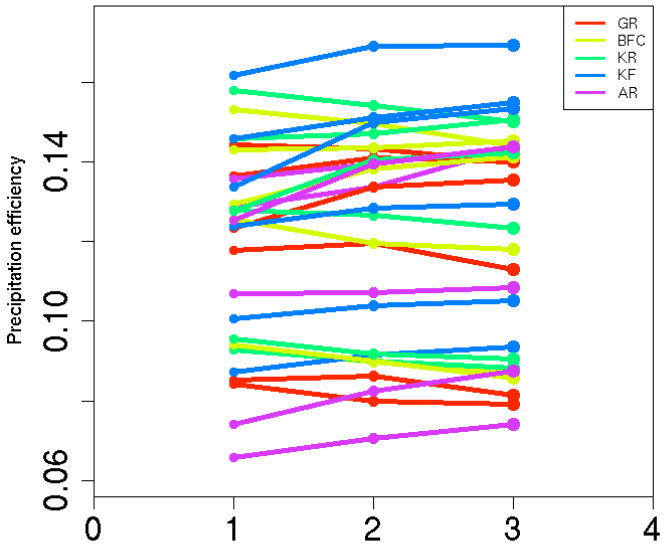

Figure 9. Precipitation efficiency for different convective closures during summers 2004, 2005, and 2006.